

Amendments to the Claims:

1. (Currently Amended) A method for verifying post-optical proximity corrected mask wafer image sensitivity to reticle manufacturing errors, said method comprising: providing a pattern of polygons; moving lines of the pattern to account for predictable distortions; after moving lines of the pattern to account for predictable distortions, statistically modifying layout the polygons based on reticle critical dimension specifications to construct a statistical virtual mask; obtaining virtual mask image response function statistical parameters; and comparing the statistical parameters to process tolerance requirements.
2. (Previously Presented) A method as recited in claim 1, further comprising forming a simulated image of the statistical virtual mask.
3. (Previously Presented) A method as recited in claim 2, further comprising calculating response functions based on the simulated image.
4. (Previously Presented) A method as recited in claim 3, further comprising collecting simulated image critical dimensions and calculating statistical parameters based on the response functions.
5. (Previously Presented) A method as recited in claim 4, further comprising comparing simulated wafer critical dimension distributions with process tolerance requirements.

6. (Previously Presented) A method as recited in claim 1, further comprising obtaining the statistical virtual mask by using reticle critical dimension specifications to induce reticle manufacturing statistical variations to layouts which have passed through an optical proximity correction procedure.

7. (Previously Presented) A method as recited in claim 6, further comprising at least one of moving fragments of a polygon and re-sizing primitives of a post-optical proximity correction polygon.

8. (Previously Presented) A method as recited in claim 6, further comprising moving fragments of a post-optical proximity correction polygon based on a randomly generated number from a reticle critical dimension specification.

9. (Previously Presented) A method as recited in claim 6, further comprising re-sizing primitives depending on a reticle critical dimension specification.

10. (Currently Amended) A yield prediction tool for mask quality specifications, said tool comprising means for moving lines of a pattern of polygons to account for predictable distortions; means for statistically modifying layout the polygons based on reticle critical dimension specifications to construct a statistical virtual mask, after moving lines of the pattern to account for predictable distortions; means for obtaining virtual mask imaging response function

statistical parameters; and means for comparing the statistical response parameters to process tolerance requirements.

11. (Previously Presented) A tool as recited in claim 10, further comprising means for simulating an aerial and/or latent image of the statistical formed virtual mask.

12. (Original) A tool as recited in claim 11, further comprising means for calculating response functions based on the simulated image.

13. (Previously Presented) A tool as recited in claim 12, further comprising means for collecting simulated image critical dimensions and calculating statistical parameters based on the response functions.

14. (Previously Presented) A tool as recited in claim 13, further comprising means for comparing simulated wafer critical dimension distributions with process tolerance requirements.

15. (Previously Presented) A tool as recited in claim 10, further comprising means for obtaining the statistical virtual mask by using reticle critical dimension specifications to statistically vary layouts which have passed through an optical proximity correction procedure.

16. (Previously Presented) A tool as recited in claim 15, further comprising means for at least one of moving fragments of a polygon and re-sizing primitives of a post-optical proximity correction polygon.

17. (Previously Presented) A tool as recited in claim 15, further comprising means for moving fragments of a post-optical proximity correction polygon based on a randomly generated number from a reticle critical dimension specification.

18. (Previously Presented) A tool as recited in claim 15, further comprising means for re-sizing primitives depending on a reticle critical dimension specification.